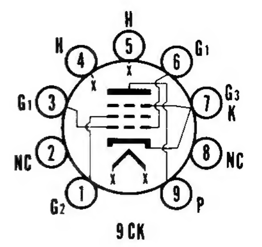


SYLVANIA TYPE 6DW5 12DW5



MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Miniature Button 9-Pin
Outline	6-4
Basing	9CK
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6DW5	12DW5
Heater Voltage	6.3	12.6 Volts
Heater Current	1200	600 Ma
Heater Warm-up Time[1]		11 Seconds
Heater-Cathode Voltage (Design Maximum Values)		
Total D C and Peak		200 Volts
Heater Positive with Respect to Cathode		
D C		100 Volts
Total D C and Peak		200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid to Plate	0.5 μμf
Input: g1 to (h + k)	14 μμf
Output: p to (h + k)	9 μμf

MAXIMUM RATINGS[2] (Design Maximum Values)

Vertical Deflection Amplifier[3] (Pentode Connected)

D C Plate Voltage	330 Volts
D C Grid No. 2 Voltage	220 Volts
Peak Positive Pulse Plate Voltage ((Abs. Max.)	2200 Volts
Peak Negative Pulse Grid Voltage	250 Volts
Plate Dissipation[4]	11 Watts
Grid No. 2 Dissipation[4]	2.5 Watts
Average Cathode Current	65 Ma
Peak Cathode Current	225 Ma
Grid Circuit Resistance	
Self Bias	2.2 Megohms

CHARACTERISTICS AND TYPICAL OPERATION

Vertical-Deflection Amplifier (Pentode Connected)

Plate Voltage	200 Volts
Grid No. 2 Voltage	150 Volts
Grid No. 1 Voltage	−22.5 Volts
Plate Current	55 Ma
Grid No. 2 Current	2.0Ma
Transconductance	5500 μmhos
Amplification Factor[3]	4.3
Plate Resistance (approx.)	15,000 Ohms
Grid Voltage for Ib = 0.1 Ma	−55 Volts

Instantaneous Plate Knee Values
Eb = 60 V, Ec2 = 150 V, and Ec1 = 0 V
Ib = 260 Ma and Ic2 = 20 Ma

NOTES:

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times the rated heater voltage divided by the rated heater current.
2. Design-maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron device of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.
   These values are chosen by the device manufacturer to provide acceptable serviceability of the device, taking responsibility for the effects of changes in operating conditions due to variations in device characteristics.
   The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey device under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, and environmental conditions.
3. For operation in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice for Television Stations; Federal Communications Commission."

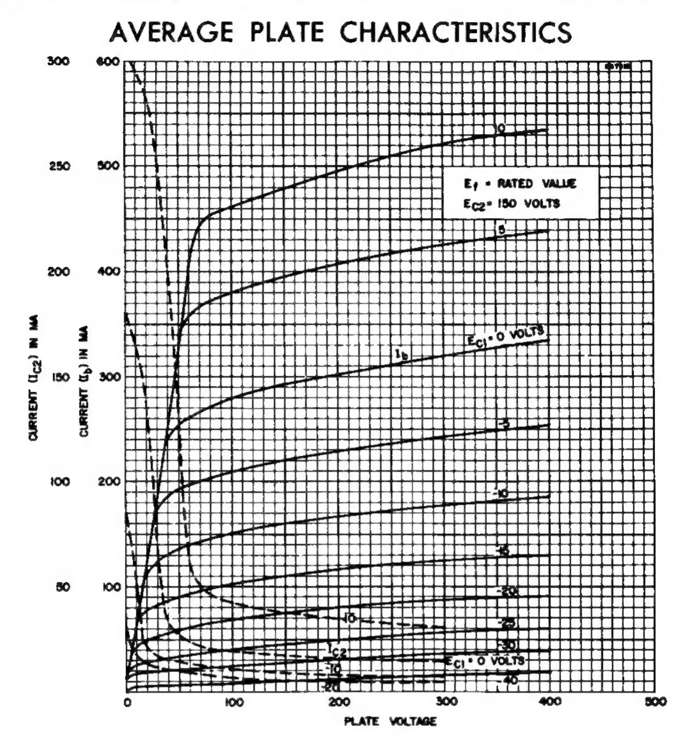
Notes: (cont'd)

4. In stages operating with grid-leak bias, an adequate bias resistor or other suitable means is required to protect the tube in the absence of excitation.

APPLICATION

The Sylvania Types 6DW5 and 12DW5 are miniature beam power tubes designed primarily for vertical-deflection amplifier service in television receivers employing 110° deflection systems. They are designed to operate at relatively low B supply voltages and feature high zero-bias plate current.
The 12DW5 has controlled heater warm-up time for series-string operation.

AVERAGE PLATE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS

